

- 9 JC20 Rec'd PCT/PTO 29 SEP 2009

CLAIMS

1. Structural component for electrolytic cells of an electrochemical reactor of the filter-press type, comprising of a frame (6) supporting its corresponding functional element (7, 7a) chosen between a bipolar sheet and respectively a diaphragm, characterized in that said frame (6) comprises a first annular frame (8) and a second annular frame (9), the two being structurally independent of each other and coupled together, coaxially, one inside the other, said first annular frame (8) and said second annular frame (9) being made of different materials, the material of said first annular frame (8) being mainly resistant to corrosion by chemical agents, the material of said second annular frame (9) being made of composite material mainly resistant to the high working pressures of said reactor (1).
2. Structural component according to claim 1, wherein said first annular frame (8) has holes (10, 10a, 10b, 10c) and channels (12, 12a) adapted to provide, in a packed layout, passages for an operating fluid inside said electrochemical reactor.
3. Structural component according to claim 1, wherein said first annular frame (8) is made of thermoplastic or thermosetting polymer material.
4. Structural component according to claim 3, wherein said polymer material contains reinforcement fillers and/or additives.